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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/843,919	04/30/2001	Sadao Nishibori	DED-3170-3	9911

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EXAMINER

PIERCE, JEREMY R

ART UNIT

PAPER NUMBER

1771

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Please find below and/or attached an Office communication concerning this application or proceeding.

72-4

Office Action Summary	Application No. 09/843,919	Applicant(s) NISHIBORI ET AL.	
	Examiner Jeremy R. Pierce	Art Unit 1771	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 30 April 2001.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-61 is/are pending in the application.
- 4a) Of the above claim(s) 33 is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-32 and 34-61 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on _____ is: a) ☐ approved b) ☐ disapproved by the Examiner.
- If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

- 13) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
- a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) Paper No(s). _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449) Paper No(s) <u>2</u> | 6) <input type="checkbox"/> Other: |

DETAILED ACTION

Election/Restrictions

1. Restriction to one of the following inventions is required under 35 U.S.C. 121:
 - I. Claims 1-32 and 34-61, drawn to a resin molded article, classified in class 428, subclass 222.
 - II. Claim 33, drawn to a method for producing a resin molded article, classified in class 264, subclass various.

The inventions are distinct, each from the other because of the following reasons:

2. Inventions I and II are related as process of making and product made. The inventions are distinct if either or both of the following can be shown: (1) that the process as claimed can be used to make other and materially different product or (2) that the product as claimed can be made by another and materially different process (MPEP § 806.05(f)). In the instant case the increase in bulk density in the product can be provided by a different method than that set forth in claim 33, such as needling or embossing the substrate.
3. Because these inventions are distinct for the reasons given above and have acquired a separate status in the art as shown by their different classification, restriction for examination purposes as indicated is proper.
4. During a telephone conversation with David Dougherty on November 22, 2002 a provisional election was made with traverse to prosecute the invention of Group I, claims 1-32 and 34-61. Affirmation of this election must be made by applicant in

replying to this Office action. Claim 33 is withdrawn from further consideration by the examiner, 37 CFR 1.142(b), as being drawn to a non-elected invention.

Claim Rejections - 35 USC § 112

5. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

6. Claims 1-32 and 34-61 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Claim 1 recites, "A resin molded article having a spring structure." Is the article of the present invention in the shape of a spring? The article itself does not seem to be a "molded article having a spring structure," but rather it appears to be a (nonwoven) fibrous substrate with filaments that possess the cited "spring structure." The article may be formed from filaments that possess the spring structure, but the article does not appear to be molded and it does not appear to have a spring structure.

Claim 1 further recites the three-dimensional structure "is increased in bulk density in a direction of width thereof, at appropriate space intervals in a direction of length thereof." This is also indefinite. What is an "appropriate" length? What are the dimensions of the area of bulk density?

Claim 1 and various other dependent claims recite the filaments to be made from a mixture of polyolefin resin and "VAC, EVA, or SBS." These abbreviations have been defined by the specification to mean vinyl acetate resin, ethylene vinyl acetate

copolymer, and styrene butadiene styrene, respectively, in the specification. However, the claims are indefinite without these abbreviations being specifically defined within the claims. The use of abbreviations should be avoided in the claims.

Claim 2 recites the structure has "voids providing low and high densities." How can a void provide both high density and low density? A void would typically be thought of as an area of low density, so how does it provide high density?

Claims 9, 12, and 49-51 are indefinite because they depend from claim 3 which cites "said VAC or said EVA" as one component. Claims 9 and 12 both recite "SBS" as the component. It is unclear whether SBS is added in further of the VAC or EVA ingredients or in replacement of them.

A broad range or limitation together with a narrow range or limitation that falls within the broad range or limitation (in the same claim) is considered indefinite, since the resulting claim does not clearly set forth the metes and bounds of the patent protection desired. Note the explanation given by the Board of Patent Appeals and Interferences in *Ex parte Wu*, 10 USPQ2d 2031, 2033 (Bd. Pat. App. & Inter. 1989), as to where broad language is followed by "such as" and then narrow language. The Board stated that this can render a claim indefinite by raising a question or doubt as to whether the feature introduced by such language is (a) merely exemplary of the remainder of the claim, and therefore not required, or (b) a required feature of the claims. Note also, for example, the decisions of *Ex parte Steigewald*, 131 USPQ 74 (Bd. App. 1961); *Ex parte Hall*, 83 USPQ 38 (Bd. App. 1948); and *Ex parte Hasche*, 86 USPQ 481 (Bd. App. 1949). In the present instance, claims 13-16 recite the broad

recitation 0.3 to 3.0 mm for the diameter of the solid fibers, and the claims also recite 0.7 to 1.0 mm, which is the narrower statement of the range/limitation.

Claim Rejections - 35 USC § 102

7. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

8. Claims 1, 2, 13-16, 27, 28, 52, and 53 are rejected under 35 U.S.C. 102(b) as being anticipated by Martin et al. (U.S. Patent No. 5,972,463).

Martin et al. disclose open, nonwoven webs made from thermoplastic filaments (column 1, lines 8-17). The web may be made from helically shaped or coiled filaments (Figure 4) interengaged into a desired ordered or random pattern to a desired web weight (column 7, line 51 –column 8, line 2). The filaments are made from a mixture of polymers. Examples of the polymers include polyolefins, such as polyethylene and polypropylene, and ethylene vinyl acetate (column 17, lines 31-64). A blend of polyethylene and/or polypropylene with poly (vinyl acetate) is also disclosed. The substrate can be embossed, thus creating an increase in bulk density in the width direction at spaced intervals of length (Figure 24 and column 20, lines 35-62). With regard to claim 2, Martin et al. disclose voids to be present in the nonwoven web (column 6, lines 58-64), and the voids would provide areas of low density and the fibers would provide areas of high density. With regard to claims 13-16, Martin et al. disclose

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the filaments to have a diameter of 0.5 to 25 mm (column 4, lines 52-61). With regard to claims 27 and 28, the web may be used as a cushioning web (column 7, line 1). With regard to claims 52 and 53, Martin et al. disclose the web can be made from hollow filaments (column 5, lines 22-24). Therefore, a web made in this embodiment would have from 50 to 100% hollow filaments.

Claim Rejections - 35 USC § 102/103

9. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

10. Claims 3-6, 29-32, and 54-56 are rejected under 35 U.S.C. 102(b) as anticipated by or, in the alternative, under 35 U.S.C. 103(a) as obvious over Martin et al.

Martin et al. disclose the ethylene-vinyl acetate can be used as the low melting component (b) and that polypropylene can be used as the higher melting component (a) (column 18, lines 31-36). However, Martin et al. do not disclose how much of the fiber is made of component (a) and how much is made of component (b). Martin et al. do teach that component (a) provides the structural role in the fibrous material, whereas component (b) provides an adhesive function to the web (column 23, lines 35-54).

Since the material of Martin et al. is used as an abrasive article or cushioning material, it would likely be inherent for the fibers of the nonwoven to comprise 70 to 97% polyolefin for structure and 3 to 30% EVA for bonding. If not inherent, it would have been obvious

to a person having ordinary skill in the art to create the nonwoven web of Martin et al. with a higher ratio of structural material and lower level of bonding material in order to provide a rigid web material with a sufficient amount of bonding agent, since it has been held that discovering an optimum value of a result effective variable involves only routine skill in the art. *In re Boesch*, 617 F.2d 272, 205 USPQ 215 (CCPA 1980).

Claim Rejections - 35 USC § 103

11. Claims 17-26, 34-48, and 57-61 are rejected under 35 U.S.C. 103(a) as being unpatentable over Martin et al.

With regard to claims 17-26, Martin et al. do not disclose the bulk density of the nonwoven web. Martin et al. do teach the bulk density or void volume can be varied by selecting the desired polymers, adjusting the configuration or geometry of the extrusion die pack, and changing the speed of the various rolls (column 13, lines 55-63). If not already inherent to the low bulk density web of Martin et al., it would have been obvious to a person having ordinary skill in the art to make the nonwoven web have a density within the claimed ranges, since it has been held that discovering an optimum value of a result effective variable involves only routine skill in the art. Adjusting the bulk density of the web is an obvious modification. With regard to claim 34-48, Martin et al. already show areas of high density and areas of low density by embossing (Figure 24). Adjusting the web to the claimed densities would also be a matter of optimizing an adjustable property. With regard to claims 57-61, Martin et al. discloses using both hollow and solid filaments (column 5, line 23). It would have been obvious to one

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having ordinary skill in the art to provide hollow filaments for lower weight to the nonwoven web surrounded by solid filaments to provide structural integrity to the corresponding hollow filaments.

12. Claims 7-12 and 49-51 are rejected under 35 U.S.C. 103(a) as being unpatentable over Martin et al. in view of Insley et al. (U.S. Patent No. 5,451,437).

Martin et al. do not disclose using styrene-butadiene-styrene polymer as a component in the nonwoven web. Insley et al. disclose filamentous styrene-butadiene-styrene is a useful elastic polymer in creating filaments (column 4, lines 30-44). It would have been obvious to one having ordinary skill in the art to use styrene-butadiene-styrene polymer in the nonwoven web of Martin et al. in order to provide elasticity to the web as taught by Insley et al., since it has been held to be within the general skill of a worker in the art to select a known material on the basis of its suitability for the intended use as a matter of obvious design choice. *In re Leshin*, 125 USPQ 416. With regard to claims 49-51, Martin et al. disclose a void volume up to 95% (column 12, line 53). But like the density of the web, Martin et al. disclose the void volume of the web may be adjusted accordingly (column 13, line 55). It would have been obvious to one having ordinary skill in the art to provide the claimed void volumes in the high and low-density areas by optimizing adjustable properties of the web.

Double Patenting

13. The nonstatutory double patenting rejection is based on a judicially created doctrine grounded in public policy (a policy reflected in the statute) so as to prevent the

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unjustified or improper timewise extension of the "right to exclude" granted by a patent and to prevent possible harassment by multiple assignees. See *In re Goodman*, 11 F.3d 1046, 29 USPQ2d 2010 (Fed. Cir. 1993); *In re Longi*, 759 F.2d 887, 225 USPQ 645 (Fed. Cir. 1985); *In re Van Ornum*, 686 F.2d 937, 214 USPQ 761 (CCPA 1982); *In re Vogel*, 422 F.2d 438, 164 USPQ 619 (CCPA 1970); and, *In re Thorington*, 418 F.2d 528, 163 USPQ 644 (CCPA 1969).

A timely filed terminal disclaimer in compliance with 37 CFR 1.321(c) may be used to overcome an actual or provisional rejection based on a nonstatutory double patenting ground provided the conflicting application or patent is shown to be commonly owned with this application. See 37 CFR 1.130(b).

Effective January 1, 1994, a registered attorney or agent of record may sign a terminal disclaimer. A terminal disclaimer signed by the assignee must fully comply with 37 CFR 3.73(b).

14. Claims 1-32 and 34-61 are rejected under the judicially created doctrine of obviousness-type double patenting as being unpatentable over claims 1-14 of U.S. Patent No. 6,470,810 in view of Martin et al. The '810 patent teaches a three-dimensional structure with voids formed by entwining helical filaments or a resinous material and claims many of the claimed properties of the present invention. The '810 patent does not teach a variation in bulk density within the web. Martin et al. teach embossing such a nonwoven material in order to provide reinforcement to the web (column 20, line 47). It would have been obvious to one having ordinary skill in the art

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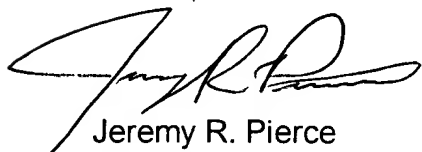
to emboss the fibrous web of the '810 patent in order to reinforce the web, as taught by Martin et al.

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Jeremy R. Pierce whose telephone number is (703) 605-4243. The examiner can normally be reached on Monday-Thursday 7-4:30 and alternate Fridays 7-4.

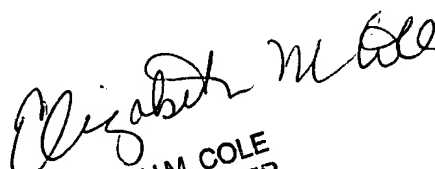
If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Terrel Morris can be reached on (703) 308-2414. The fax phone numbers for the organization where this application or proceeding is assigned are (703) 872-9310 for regular communications and (703) 872-9311 for After Final communications.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703) 308-0661.



Jeremy R. Pierce
Examiner
Art Unit 1771

November 25, 2002



ELIZABETH M. COLE
PRIMARY EXAMINER